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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,706	02/07/2006	Ze-peng Zhou	ZZ-2006-01-NP	3886

7590  
Michael G Crilly  
104 South York Road  
Hatboro, PA 19040

08/14/2007

EXAMINER
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QUINN, COLLEEN M

ART UNIT	PAPER NUMBER
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3634

MAIL DATE	DELIVERY MODE
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/567,706

Applicant(s)

ZHOU, ZE-PENG

Examiner

Colleen M. Quinn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "fire-retardant textile band" on the ladder rungs, as recited in claim 6, and the spacer plate "at an angle larger than 90 degrees with respect to said base plate", as recited in claim 2, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bihl (816,896). Bihl teaches a rope ladder (figure 2) comprising a hook (3) and a ladder body comprising a pair of flexible belt rails (2) disposed in parallel fashion and fixed at one end to the hook (figure 2), a plurality of rungs (4) disposed between and separately attached to the belt rails (figures 2 & 3), and a plurality of support attachments (figure 3) symmetrically attached onto the back of the belt rails (figures 1 & 3), the support attachments attached where the rungs are attached to the belt (figures 1 & 3), each support attachment having a spacer plate (13, 14) which is rotatable with respect to the rungs and belt (page 2, lines 58-65), so as to project from the ladder when the ladder is extended (page 2, lines 47-58), and wherein each rung (therefore inherently every third and fourth rung included) is provided with a support attachment (claim 1).

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Martin et al. (6,135,239). Martin et al. disclose a hook (40) and ladder body (2) comprising a pair of flexible belt rails (3) disposed in parallel fashion and each fixed at one end to the hook (figure 3), a plurality of aluminum (col. 3, lines 40-42) rungs (4) disposed between and separately attached (figure 5) to the belt rails; a plurality of support attachments (46)

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symmetrically fixed onto the back of the belt rails where the rungs are attached (47) and rotatable with respect to the rung and belt rails so as to project from the ladder when the ladder is extended (figures 1 & 5), and wherein the support attachment comprises a base plate (unnumbered vertical portion of hinge attached to 47) and a spacer plate (49) that pivots outward and is limited by a stop (48) from pivoting beyond a fully extended position (col.3, lines 43-50).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihl as applied to claims 1, 4 and 5 above, and further in view of Brook (US 5,499,692). Bihl fails to disclose the hook to comprise a U-shaped hook body and L-shaped hooks

However, Brook teaches a fire escape ladder supported from a hook (figure 2) wherein the hook comprises a U-shaped hook body (9, 21) and two L-shaped hooks (7), the U-shaped hook body having a pair of first horizontal bars (15) disposed about and attached to the vertical elements of the U-shaped hook body (figure 1), the L-shaped hooks each having a vertical bar and horizontal bar, and each horizontal bar having a plurality of holes arranged to be connected via nut and bolt with the holes in the horizontal bars extending from the U-shaped hook body (figures 1 & 2). Though a

butterfly nut is not disclosed, a standard nut and bolt configuration is (figure 1), and one of ordinary skill in the art would recognize that both perform the same function and one can be substituted for the other if desired.

Therefore, it would have been obvious to one of ordinary skill in the art, to provide the ladder of Bihl with the hook attachment as taught by Brook in order to further secure the ladder when in use.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. as applied to claim 1 above and further in view of Prout (4,419,788). Martin et al. fail to disclose a torsion spring and pivot pin disposed within the hinged support attachment.

However, Prout teaches a hinge (figure 1) comprising a base plate (12) and pivoting plate (14) wherein the pivoting plate rotates as a result of adjustment of the internal torsion spring (30) and pivot pins (26,28) providing an adjustable hinge allowing the user to select the desired range that the hinge can open (col. 2, lines 15-28).

Therefore, it would have been obvious to one of ordinary skill in the art, to provide the ladder of Martin et al. with the hinge device as taught by Prout in order to provide a hinge that can be adjusted to open to any desired angle.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. as applied to claim 1 above and further in view of Brook (5,499,692). Martin et al. fail to disclose a fire retardant textile band disposed on the rungs.

However, Brook teaches a fire escape ladder (1) having a ladder body comprising a pair of flexible belt rails having a plurality of rungs disposed in-between (figure 2) and wherein there is a band of fire-retardant material disposed thereon (figure 2).

Therefore, it would have been obvious to one of ordinary skill in the art to provide the ladder of Martin et al. with the fire-retardant material disposed on the rungs as taught by Brook, in order to provide further protection to both the user and apparatus.

### ***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Powell (1,340,627) and Jacobson (US 5971,105) both disclose key features of the applicant's claimed invention, including flexible belt rails, spacer plates, hooks and fire-retardant material disposed on the rungs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen M. Quinn whose telephone number is (571) 272-6289. The examiner can normally be reached on 8:30AM-5:00PM Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571) 272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMQ  
8/9/07

A handwritten signature in dark ink, appearing to read "Brian Glessner", with a long horizontal flourish extending to the right.

BRIAN E. GLESSNER  
SUPERVISORY PATENT EXAMINER